



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Marco FRANCIA

Attorney Docket Q63527

Appln. No.: 09/802,932

Attorney Docket Q

Confirmation No.: 7225

Group Art Unit: Not yet assigned

Filed: March 12, 2001

Examiner: Not yet assigned

For: A FERMENTATION VAT

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

**IN THE SPECIFICATION:**

Page 1, after the title, insert the heading

**BACKGROUND OF THE INVENTION**

Page 2, after line 6 insert the heading

**SUMMARY OF THE INVENTION**

Page 3, before line 1 insert the heading

**BRIEF DESCRIPTION OF THE DRAWINGS**

after line 10 insert the heading

**DETAILED DESCRIPTION OF THE INVENTION**

**IN THE CLAIMS:**

Please enter the following amended claims:

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**IN THE ABSTRACT:**

Please delete the present Abstract of the Disclosure and replace it with the following  
new Abstract of the Disclosure.

## ABSTRACT

An automatically operating fermentation vat for wine-making establishments includes a main vat (2), an upper vat (4) over the main vat, an uplift pipe (8, 12, 10, 24, 26) for feeding the fermenting liquid from the bottom of the main vat to the upper vat, means (16, 14, 18) for discharging this liquid from the upper vat into the main vat so as to spray the layer of marc floating in the main vat and injector means (20, 32) associated with the uplift pipe for injecting an oxygen-containing gas into the liquid flowing through the said pipe, characterised in that the uplift pipe has a first outlet aperture (24) directing liquid into the upper vat (4) and a second outlet aperture (40) which directs the liquid into the mass of liquid in the main vat, valve means (22) being associated with the uplift pipe for selectively directing the liquid into the upper vat or into the main vat or both at the same time though the two outlet apertures.

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REMARKS

The above specification has been amended to delete the multiple dependencies and add section headings to the various sections of the application therein. Entry and consideration of this Amendment and an early and favorable action on the merits are respectfully requested.

Respectfully submitted,



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Date: June 13, 2001

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Page 1, after the title, insert the heading

BACKGROUND OF THE INVENTION

Page 2, after line 6 insert the heading

SUMMARY OF THE INVENTION

Page 3, before line 1 insert the heading

BRIEF DESCRIPTION OF THE DRAWINGS

after line 10 insert the heading

DETAILED DESCRIPTION OF THE INVENTION

IN THE CLAIMS:

The claims are amended as follows:

3. (Amended) A fermentation vat according to Claim 1 or ~~Claim 2~~, characterised in that the said selective valve means (22) include a valve body (51) in the shape of a hollow cylinder, at least two outlet apertures (52a, 52b) in the lateral surface of the said valve body, an inlet aperture (51c) in one end of the said valve body and a substantially cylindrical valve shutter (80) arranged for coaxial rotation within the said body and shaped so as to form a 90° elbow joint between the said intake aperture and one of the said outlet apertures.

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4. (Amended) A fermentation vat according to Claims 1-to-3, characterised in that the said injector means (28, 32) are located in the uplift pipe upstream of the said selective valve means (22).

5. (Amended) A fermentation vat according to Claims 1-to-3, characterised in that the said injector means (28, 32) are located on the uplift pipe downstream of the said selective valve means (22) and on at least one of the pipes (24, 26) leading from the said valve means (22) to deliver the liquid into the upper vat and/or into the main vat.

6. (Amended) A fermentation vat according to Claims 1-to-5, characterised in that it includes a control unit (38) which cooperates with the said selective valve means (22) associated with the uplift pipe and is operable to control:

- operations to oxygenate the liquid in the main vat (2) by drawing off liquid from the bottom of the said vat, aspirating ambient air, mixing it into the flow of liquid and returning the oxygenated liquid to the main vat, and
- operations to oxygenate the liquid in the main vat (2) by drawing off liquid from the bottom of the said vat, aspirating air and mixing it with the flow of liquid, then conveying the oxygenated liquid to the upper vat (4) and discharging it therefrom into the main vat, thereby spraying the marc cap floating on the must.

7. A fermentation method, in particular for red wine, carried out in a fermentation vat according to Claims 1-to-6, characterised in that it includes the steps of:

- a) carrying out cycles for oxygenating the liquid in the main vat by drawing off liquid from the bottom of the said vat, aspirating ambient air and mixing it with the flow of liquid and returning the oxygenated liquid to the mass of liquid in the main vat, and

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b) carrying out cycles for oxygenating the liquid in the main vat by drawing off liquid from the bottom of the said vat, aspirating ambient air and mixing it with the flow of liquid, conveying the oxygenated liquid to the upper vat and discharging this liquid from there into the main vat, thereby spraying the marc floating on the liquid contained therein.

**IN THE ABSTRACT OF DISCLOSURE:**

**The abstract is changed as follows:**

**ABSTRACT**

An automatically operating fermentation vat for wine-making establishments includes a main vat (2), an upper vat (4) over the main vat, an uplift pipe (8, 12, 10, 24, 26) for feeding the fermenting liquid from the bottom of the main vat to the upper vat, means (16, 14, 18) for discharging this liquid from the upper vat into the main vat so as to spray the layer of marc floating in the main vat and injector means (20, 32) associated with the uplift pipe for injecting an oxygen-containing gas into the liquid flowing through the said pipe, characterised in that the uplift pipe has a first outlet aperture (24) directing liquid into the upper vat (4) and a second outlet aperture (40) which directs the liquid into the mass of liquid in the main vat, valve means (22) being associated with the uplift pipe for selectively directing the liquid into the upper vat or into the main vat or both at the same time though the two outlet apertures.

(Figure 1)